ABSTRACT OF THE DISCLOSURE

A semiconductor device has a processor, a first memory unit accessed by the processor, a plurality of page memory units obtained by partitioning a second memory unit which is accessible by the processor at a speed higher than the speed at which the first

5   memory unit is accessible such that each of the page memory units has a storage capacity larger than the memory capacity of a line composing a cache memory, a tag adding, to each of the page memory units, tag information indicative of an address value in the first memory unit and priority information indicative of a replacement priority, a tag comparator for comparing, upon receipt of an access request from the processor, the address value in

10   the first memory unit with the tag information held by the tag, and a replacement control unit for replacing the respective contents of the page memory units.